

## ABSTRACT

A latex having a reduced amount of 4-phenylcyclohexene is obtainable by reacting A) 30-90% by weight of at least one ethylenically unsaturated monomer; B) 70-10% by weight of a diene; C) 1-10% by weight of  $\alpha,\beta$ -unsaturated carboxylic acids, carboxylic acid nitriles, carboxylic acid amides, or mixtures thereof; and D) an auxiliary, an additive or mixtures thereof; wherein a sum of A, B and C is 100% by weight. The reaction follows a gradient regime for components A and B. In the gradient regime, an amount added per unit time of one of components A or B continuously increases, while simultaneously an amount added per unit time continuously decreases for one of components A or B which does not undergo the continuous increase; with the proviso that a starting molar ratio of A to B is adjusted from a range of 0.15 - 0.95 or 1.05 - 6.66 through at least one discontinuous change in the amount added per unit time to a target molar ratio of A to B, in the range of 1.05 - 6.66 or 0.15 - 0.95, and thereafter the change in the amount added per unit time is made i) constantly for A and B, and/or ii) decreasingly for A and ascendingly for B, and/or iii) decreasingly for B and ascendingly for A, in any sequence, individually or in combination.